

ENVIRONMENTAL ASSESSMENT
Case File No. AA-026417 (2316)
AK-040-03-EA-023

Applicant: United States Department of the Interior
United States Geological Survey

Type of
Action: Withdrawal Extension

Location: Sitka Magnetic Observatory
Section 36, T. 55 S., R. 63 E., Copper River Meridian

Prepared By: James F. Moore

Preparing Office: Bureau of Land Management
Anchorage Field Office
6881 Abbott Loop Road
Anchorage, Alaska 99507

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I. INTRODUCTION

On July 25, 2002, the United States Geological Survey (USGS) submitted a request to extend the withdrawal of 117.37 acres of land in Sitka, Alaska for use as a magnetic and seismologic observatory site. (A magnetic observatory is a controlled facility with a non-magnetic environment for the continuous monitoring of the earth's magnetic field.) The land has been withdrawn for government use since 1898. Initially, the parcel was an experimental agricultural station under the jurisdiction of the Department of Agriculture and then it was transferred to the US Coast and Geodetic Survey for use as a magnetic and seismologic observatory site in 1939. Responsibility for earthquake research, compiling magnetic data, and US Coast and Geodetic Survey structures and equipment was transferred to the USGS on October 19, 1973. Transfer of administrative jurisdiction and formal reservation of the parcel for use by the USGS occurred on September 6, 1983. The withdrawal expires on September 6, 2003.

Geomagnetic storms, induced by solar activity, pose significant hazards to satellites, electrical power distribution systems, radio communications, navigation, and geophysical surveys. Strong storms can also expose astronauts and crews of high-flying aircraft to dangerous levels of radiation. Over the past few years, such space weather hazards have caused crippling damage to communication satellites and power utility grids around the world. Economic losses from recent geomagnetic storms have run into hundreds of millions of dollars. The USGS Geomagnetism Program operates a network of geomagnetic observatories, which monitor the onset of solar-induced storms and give warnings that help diminish losses to military and commercial operations and facilities. The USGS maintains a network of 14 magnetic observatories in the conterminous United States, Alaska, Guam, Puerto Rico, and Hawaii. These observatories provide Nationwide coverage, continuously measure the earth's magnetic field, and carry out periodic observations for precise determination of the geomagnetic field to calibrate the continuous measurements. The data gathered by these observatories form the backbone of the program. Magnetic field variations are tracked continuously, and the data are made available to clients in a variety of time frames ranging from near real-time to five-year summary information, depending on clients' needs and requirements. USGS geomagnetic observatories use satellite transmission links to send data at 12-minute intervals to the USGS Geomagnetic Data Management Center in Golden, Colorado. This Center also operates as an international geomagnetic information node, which is connected with similar installations worldwide for the distribution of geomagnetic data via satellite. These near real-time data are used by the U.S. Air Force and NOAA's Space Environment Center (SEC) for hazard mitigation by warning of potential satellite failures, communication disruptions, power grid failures, and other problems caused by intense geomagnetic storms.

The data collected at this site is used along with data from the other 13 sites to provide for the standard deviation found on most maps, a necessary component to accurate

navigation. While the use of the data for vessel and aircraft surface navigation is obvious, today the United States Air Force and NASA also use the data.

A. Purpose and Need for the Proposed Action:

The Sitka magnetic and seismologic observatory site is one of fourteen sites maintained by the United States Government. These sites are in turn part of a global system that measures earth magnetic and seismological anomalies. The data gathered has been used for navigation and scientific purposes from 1939 to the present. The site is necessary to continue this vital government service.

B. Conformance With Land Use Plan:

No land use plan exists for this area. However, this environmental analysis assesses the impacts of the Proposed Action and provides a basis for a decision on the proposal, 43 CFR 1610.8 (b)(1).

C. Relationship to Statutes, Regulations, Policies, Plans or Other Environmental Analyses:

The Secretary of the Interior is authorized under Section 204 of the Federal Land Policy and Management Act (FLPMA) of 1976, to extend the withdrawal thereby withholding this area of Federal land from settlement, sale, location, or entry.

II. PROPOSED ACTION AND ALTERNATIVE

A. Proposed Action:

The Proposed Action is to continue the use of 117.13 acres of land in Sitka, Alaska for a magnetic and seismological observatory to be used by the USGS. The land is described as Lot 4, U.S. Survey 2545, and is within Section 36, T. 55 S., R. 63 E., Copper River Meridian.

B. No Action Alternative:

The No Action Alternative is to continue use of the improved land as a magnetic and seismological observatory used by the USGS but without the protection provided by the withdrawal status. An ANCSA 14(h)(3) selection by Shee Atika Native Corporation would then attach.

III. AFFECTED ENVIRONMENT

Sitka, is the fifth largest city in Alaska (population 8,835-2000 census), situated on Baranof Island, on the outer coast of Southeast Alaska and accessible only by air and sea. This early Russian settlement was the headquarters of the Russian-American Company from 1805 until the territory's transfer to the United States on October 18, 1867. It then served as the capital of the territory from 1867 until 1906 when Juneau became the capital. Shortly after passage of the first land entry legislation to address Alaska, this

parcel was set aside from entry for government use as an agricultural experimental station.

Congress initially appropriated \$5,000.00 to assess the agricultural potential of the territory. The investigation led to a favorable report and a request for an additional \$15,000.00 for the establishment and maintenance of agricultural experiment stations at Sitka, Kenai, Copper Center, Kodiak, and Rampart. The subject parcel is the former agricultural experimental station at Sitka.

In 1939, President Roosevelt changed the sites' use to that of a magnetic and seismological observatory and transferred the site to the United States Coast and Geodetic Survey under the United States Department of Commerce.

A. Critical Elements:

The following critical elements of the human environment are either not present or would not be affected by the Proposed Action:

Air Quality

Areas of Critical Environmental Concern

Farm Lands (Prime or Unique)

Flood plains

Native American Religious Concerns

Wastes, Hazardous, or Solid

Water Quality

Wetlands/Riparian Zones

Wild and Scenic Rivers

Wilderness

Environmental Justice

Noxious Weeds, Invasive species

Cultural Resources

Threatened or Endangered Species

ANILCA Sec. 810 Subsistence

B. Land Status:

On December 17, 1975, the Shee Atika Native Corporation filed an ANCSA 14(h)(3) selection. As long as this withdrawal remains in place, the selection cannot attach. To the north the parcel is bound by a 108.28-acre parcel selected by the State and an 83.26-acre parcel conveyed under the Homestead Act. To the south the property is bound by three parcels, one of which was conveyed to the State, another to the townsite trustee and an 8.68-acre parcel conveyed under the Homestead Act. To the southeast the parcel is bound by four parcels. One parcel has been set aside as a veteran's cemetery, one has been

conveyed to the State, one is dedicated to use by the US Forest Service and the final parcel constitutes the Sitka National Cemetery.

IV. ENVIRONMENTAL CONSEQUENCES

A. Impacts of the Proposed Action:

The Proposed Action is administrative in nature and would have no impacts on the human environment. The parcel will remain unavailable from entry as it has from the passage of the initial land laws affecting Alaska.

B. Impacts of the No Action Alternative:

Under the No Action Alternative, it is possible the land could become available for development through the Shee Atika Native Corporation. The USGS would then be placed in the position of securing a new site for a magnetic and seismological observatory should the system of remaining sites be inadequate to continue to provide quality research data.

C. Cumulative or Residual Impacts:

There are no cumulative or residual impacts.

D. Mitigation Measures:

There are no mitigation measures needed.

V. CONSULTATION AND COORDINATION

A. Persons and Agencies Consulted:

Leroy W. Pakratz
Observatory Operations Task Leader
U.S. Geological Survey
PO Box 25046, MS 966
Denver, Colorado 80225-0046

City of Sitka Planning Department

Michael Trainor
U.S. Forest Service, Sitka, Alaska

B. List of Preparers:

James F. Moore, Lead Preparer, Realty Specialist
Jeff Denton, Subsistence Program Specialist
Bruce Seppi, Wildlife Biologist
Deborah Blank, Botanist
Donna Redding, Archaeologist